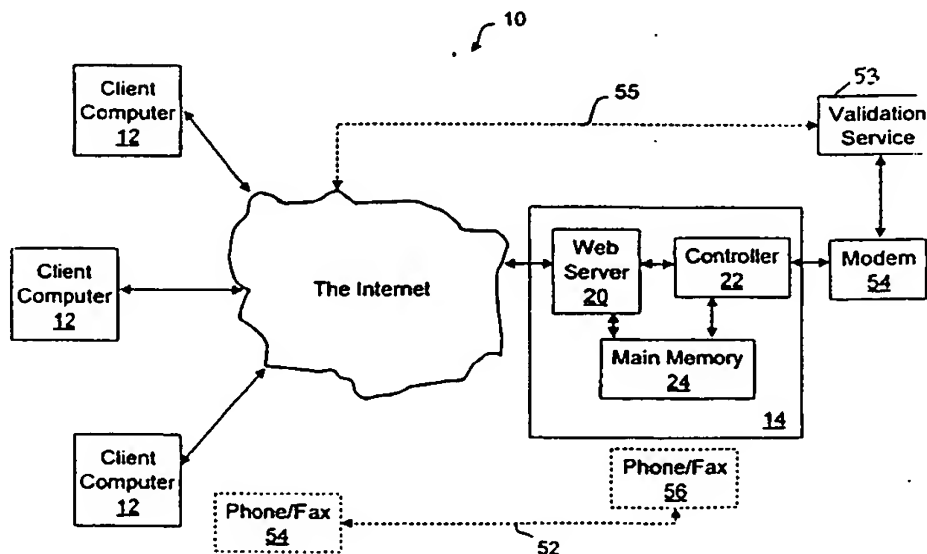




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(54) Title: SYSTEM AND METHOD FOR PROVIDING PREPAID ACCESS TO TELEPHONE SERVICE



## (57) Abstract

A system is described for delivering telephone access numbers for long-distance telephone service providers over the Internet or other interconnected network of computers. A customer uses his or her data sharing device, such as a personal computer, to access a supplier of telephone access numbers over the Internet. Upon receipt of a request for the telephone access number, which may be accompanied by customer information, payment information, and/or a quantity-of-service amount, the central computer delivers to the customer's data sharing device the telephone access number together with a password for use by the customer to dial the long-distance telephone service provider.

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## **SYSTEM AND METHOD FOR PROVIDING PREPAID ACCESS TO TELEPHONE SERVICE**

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### **FIELD OF THE INVENTION**

The present invention relates generally to techniques for providing free or prepaid access to telephone and other services, and more particularly to a system and method for electronic distribution of free or prepaid card instruments.

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### **BACKGROUND OF THE INVENTION**

Recent competition in the long distance carrier market has led to a proliferation of new products and marketing techniques for selling long distance telephone service. One recent innovation is the sale of prepaid telephone calling cards which entitle the bearer to

a certain amount of long distance time, both within the continental United States and in certain international jurisdictions. In addition to their use as a debit card in placing telephone calls, these cards have been used extensively in the marketing areas of promotion and advertising. At present the telephone card can be used to place local, long distance and international calls. Typically, telephone cards are sold in denominations of \$5.00, \$10.00 and \$20.00. Typically, a face of each card contains special coding information including the month and year the card was manufactured. A code can represent the type of card and includes the issue quantity or card value. In some cases, issued telephone cards will only work with specially equipped charge card telephones. This limits the number of locations from which consumers may place calls, and increases costs due to the installation of specialized equipment.

Telephone cards have typically been distributed through "over the counter" sales at grocery stores, convenience stores, gas stations, and to a lesser extent through manually operated mechanical vending machines. Vending machine distribution, as opposed to over the counter sales, offers benefits relative to manual distribution and thus is becoming increasingly popular. Vending solutions tend to allay concerns about having to carry expensive card inventory, theft, accounting and the labor costs associated with each. Automated dispensing of telephone cards eliminates the majority of these concerns and would presumably facilitate the advancement of telephone card distribution and use. Automated machines for handling credit and debit transactions, including vending machines and automatic teller machines, have already proven to be successful in the marketplace.

United States Patent No. 5,285,382 to Muehlberger et al. (the '382 patent) discloses a system and method for processing credit card transactions, which includes a data processor with memory storage capable of accessing an electronic clearing facility through a time-rated, for example, long distance, communication link. The system generates a real-time communication with the clearing facility to determine card validity and to initiate funds collection for transactions above a predetermined amount. The '382 patent describes a system which is particularly useful for remote automated vending machines and automatic teller machines which typically handle a large volume of credit and debit transactions, each of which represents a small dollar amount.

An automated telephone card dispenser is disclosed in United States Patent No. 5,696,908 (the '908 patent). Telephone debit cards are automatically vended through a microprocessor controlled vending machine which permits card payment in cash and credit. The customer can select a desired telephone card value and a desired telecommunications carrier. Prepaid and printed cards are dispensed. The vending machine, through its microprocessor and modem, calls the selected telecommunications carrier and updates its database with the value and serial number of the debit card being dispensed. This enables the telecommunications carrier to activate the dispensed card.

Although the system of the '908 patent may reduce the incidence of theft by providing for the activation of cards only upon purchase, it necessitates visiting a retail store or other public location in order to gain access to a card dispensing machine.

## BRIEF DESCRIPTION OF THE INVENTION

The present inventors believe that convenience is enhanced by the present invention, which leverages the increased availability of the Internet to ordinary consumers. The present generally involves use of an Internet-based system for providing  
5 free or prepaid telephone service which can also facilitate acquisition of reliable consumer profile and mailing list information. Moreover, centralized storage of access numbers and associated PINs (Personal Identification Numbers) or other passwords would enable pre-activation of phone service, thereby obviating the need for an activation process to occur upon the purchase of prepaid service.

10 Therefore, an object of the present invention is to provide a system for authorizing a user to use a telecommunications path, comprising a central computer; and a user's data sharing device in communication with said central computer, said data sharing device for transferring a request for authorization to said central computer; wherein said central computer, in response to said request, transfers to said data sharing device a telephone  
15 access number to be used to dial the telecommunications path.

A further object of the present invention is to provide a method of authorizing access to a telecommunications path, comprising (a) transmitting, from a user's data sharing device over the Internet to a central host computer, a request for telecommunications service; and (b) transmitting, from the central host computer to the  
20 user's data sharing device in response to the request, a telephone access number to be used to access the telecommunications path.

The method of the present invention may also include accessing a telephone service provider, comprising transmitting a request, over the Internet, to a central

computer, the central computer having authority to grant access to the telephone service provider, wherein the request includes a quantity-of-service amount; and transmitting, over the Internet in response to the request, (i) a telephone access number for dialing the telephone service provider, and (ii) a password to be used when accessing the telephone service provider.

Further scope of applicability of the present invention will become apparent from a review of the detailed description and accompanying drawings. It should be understood that the description and examples, while indicating preferred embodiments of the present invention, are not intended to limit the breadth of the invention and instead will inevitably lead to various changes and modifications within the spirit and scope of the invention as will be evident to those skilled in the art.

### BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will become more fully understood from the detailed description given below, together with the accompanying drawings which are given by way of illustration only and thus are not to be construed as limiting the scope of the present invention. In the drawings:

FIG. 1 provides a generalized representation of the architecture of a system disposed to provide prepaid telephone or other service in accordance with the invention.

FIG. 2 is a more detailed block diagram of the components contained in one of the client computers shown in FIG. 1.

FIG. 3 provides an illustrative representation of the structure of a database disposed within the main memory of a host computer, according to an embodiment of the present invention.

FIGS. 4(a) and 4(b) provide an illustrative representation of the structure of a database disposed within the main memory of a host computer, according to another embodiment of the present invention.

### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Figure 1 provides a generalized representation of the architecture of a system 10 disposed to provide free or prepaid telephone service in accordance with a preferred embodiment of the present invention. In the preferred embodiment the system 10 includes one or more client computers 12 in communication with a central host computer 14 via the Internet 18. The central host computer 14 preferably includes a web server 20, controller 22, and a main memory unit 24.

The artisan will appreciate that, although the preferred embodiment is described in relation to the Internet, the present invention will find applicability in any environment having interconnected data sharing devices. The client computers 12 may be personal computers, portable telecommunication devices, or any other device having the capability of communicating by wired or wireless paths with the central host computer 14.

In operation, a customer, agent, or other entity uses the client computer 12 to communicate with the central host computer 14 and submits a request for prepaid telephone service. If payment is to be made for the card, then the customer may include payment information, such as a credit or debit card number or the number of any other



account which is to be charged for the telephone service. Unless specifically stated to the contrary, it should be understood that the term "prepaid" as used throughout this description is intended to encompass embodiments in which the telephone (or other) service is exchanged in return for money, services, goods, or other consideration. The telephone service may also be distributed for free, such as part of an advertising campaign.

The telephone service supported by the present invention is not to be limited to voice communications unless so specified. Quite to the contrary, the telephone service contemplated by and usable with the present invention may include one-way and/or multi-way data transmissions, video transmissions, music transmissions, etc., to/from the customer's data sharing device.

The main memory unit 24 includes a database for storing unique pairs of numbers, one of which is a telephone number (preferably a toll free or "1-800"-type of access number), and the other of which is an associated PIN or other type of password. Each unique pair of numbers may also be associated with a specific quantity-of-service amount, such as a predetermined number of calling units or minutes, or monetarily denominated amounts of prepaid telephone service (e.g., 10 units, 20 units, 10 minutes, 20 minutes, \$5, \$10, \$20, or any other quantity). The quantity-of-service amount can also be set upon receipt of the customer's request, and be based upon the amount of prepaid service that the customer desires. Upon (1) receiving the request for phone service and, optionally, (2) verifying credit card or other payment information submitted with the request in the case where the service is being purchased, and, optionally, (3) verifying certain customer information such as when the service is provided for free or

upon subscription or whenever else such verification may apply, the host computer 14 transmits an electronic phone card containing one of the unique number pairs to the requesting client computer 12. This transmission may be effected either by making the electronic phone card available to the requesting client computer 12 as an HTML (hypertext markup language) document on server 20, or by sending the requesting client computer 12 an electronic message such as an e-mail message. Once received at the client computer 12, the electronic phone card may be directly displayed or printed, if the client wishes to do so. Even when the electronic phone card takes the form of an HTML document, a confirmation copy of the card may optionally be sent via e-mail to those customers furnishing e-mail addresses with their request. A confirmation copy may also be sent by postal mail. In cases where the customer is a member of an entity, such as an employee of a company, notifications may be sent automatically to supervisory personnel of the company, specifying the employee who has requested and/or obtained authorization for additional service, and the quantity-of-service that was issued. Such notification may also include one or both numbers of the unique pair.

Upon learning the telephone access number and associated password, the customer may obtain service from any telephone by dialing the specified "1-800"-type access number and entering the associated password. For specific "800" numbers, service can be obtained in the United States and in those foreign jurisdictions supporting such "800" number dialing. The present invention, however, is not to be limited by the specific telephone access number.

Figure 2 is a more detailed block diagram of the components contained in an embodiment of the client computers 12. Each of the client computers 12 need not have

this configuration, and it is intended to be merely illustrative. The client computer 12 includes a central processing unit ("CPU") 26 and a memory subsystem 28. The memory subsystem 28 holds a copy of the operating system 27 for the client computer 12, such as the Microsoft Windows 95 Operating System sold by Microsoft Corporation. Also included within the memory subsystem 28 are RAM 29 and application programs 30, such as a commercially available web browser described below. The client computer 12 may also include a number of peripheral devices. These peripheral devices include a secondary storage device 40 (such as a magnetic disk drive), a keyboard 42, a video display 44, mouse 46, printer 50 and modem 52.

In the preferred embodiment, the purchase or, more generally, the receipt of electronic phone cards is made using an Internet navigational software "browser" program operative on a client computer 12. Such browser programs are widely available, and include titles such as Netscape Navigator and Microsoft Internet Explorer. Upon using such web browser to access (via modem 52) the internet domain/Home Page supported by the web server 20, a web page requesting customer information, such as customer profile and/or demographic information and/or name and/or address and/or age and/or affiliation with companies and/or schools, etc., and credit card or other payment information, is presented to a prospective customer via the display 44. The customer enters the amount of prepaid service that is desired, such as by using mouse 46 to click on respective icons shown on display 44 for monetary or unit amounts of prepaid telephone service (e.g., \$10.00, \$20.00 or \$50.00, or 10 units or 20 units, or 10 minutes or 20 minutes), or by entering the amount of prepaid service into a data input box displayed on the display 44. That is, the quantity-of-service can be selected from a set of possible

predetermined amounts, or the customer can specify whatever amount he or she desires. Another alternative is to give the customer no option at all, and simply to issue the customer a quantity-of-service that the system selects.

5 If the transaction includes payment information, then upon receipt of the requested credit card (or other payment) information at the web server 20, the controller 22 generates a real-time communication to a validation service 53 to verify proper use of the credit card and to request electronic transfer of the selected monetary amount from the customer's account to the account of the system operator. Online communication with the validation service is performed via a modem 54 in communication with the 10 controller 22 via an interface control board or the like (not shown in FIG. 1). Alternatively, such online communication may be effected through an Internet connection 55 formed between the validation service 53 and the host computer 14. If credit verification is not received, then the customer will be prompted via the display 44 with an exit message, typically asking that the customer retry the previous selection.

15 The validation procedure may also, or alternatively, include a verification of the customer's identity. In such a case, the validation service would provide an indication of whether the customer's information that was received is valid or not.

20 Once credit and/or personal validation has been received, the web server 20 preferably generates the electronic phone card in the form of an HTML document and transmits it to the requesting computer 12. This representation of the electronic phone card may be accessed by the web browser using modem 52, and may then be displayed via display 44 or printed by the printer 50. In a preferred embodiment the electronic phone card includes an "800" access telephone number, an associated password, a toll-

free customer service number, and usage directions. If the customer has provided an e-mail address, the electronic phone card may be distributed to the customer via an e-mail message received by modem 52.

In an alternate embodiment, users of client computers 12 may request Internet  
5 delivery of electronic phone cards ordered by other conventional means (e.g., by phone, e-mail or fax). Referring to FIG. 1, a telecommunications link 52 connects a user's phone or fax device 54 to a corresponding phone or fax device 56 proximate the host computer 14. After receiving a request for an electronic phone card at device 56, an operator  
10 submits the payment information (e.g., credit card, check debit or electronic currency information) and/or customer information included in the request to the validation service 53. Upon receiving validation, the operator instructs the host computer 14 to provide, typically via e-mail, an electronic phone card in the specified denomination to the requesting user.

The operator of the system 10 will generally purchase minutes of usage from a  
15 telephone company or long distance carrier. Such an entity owns the switch through which routed calls are placed using an electronic phone card of the present invention. The switch provides call accounting features which, by way of example, account for the customers placing calls, to whom such calls are placed, and the charges accruing for each call.

20 In one particular embodiment of the present invention customers may purchase or otherwise receive a conventional calling card from a distributor (e.g., a retailer or reseller), and obtain a replacement electronic phone card in the manner described above. For example, a distributor may elect to distribute a tangible calling card free of charge in

connection with the purchase of another item, or may simply sell the card through ordinary channels. Such a card could be of the form and size of an ordinary plastic credit card and would include printed indicia indicating a telephone access number, password, and usage instructions. The instructions would inform the user that additional prepaid service could be purchased via the Internet in the manner described herein, and in such case would include an Internet address associated with the system operator. The specified Internet address could simply be that for the web site of the system operator itself (e.g., [www.<companyname>.com](http://www.<companyname>.com)), or could be an affiliated address specific to the distributor of the card (e.g., [www.<companyname>.com/distributor-name](http://www.<companyname>.com/distributor-name)). In the former case the customer could be prompted to select the identity of the distributor furnishing the initial calling card, and could be linked to the distributor's web site upon making the requested selection. In this way the sale of an electronic phone card via the Internet may be credited to the distributor of the conventional card leading to the online sale.

Each distributor will preferably purchase passwords from the system operator, thereby obviating the need to separately contract with a telecommunications carrier. This allows electronic phone cards to be purchased from the web site of each distributor in the manner described above. When a distributor's supply of passwords drops below a predetermined threshold, the system operator may automatically allocate an additional block of passwords to the distributor. The distributor's credit card account or the like will typically be debited by the system operator at the time of such allocation.

Figure 3 provides an illustrative representation of the structure of the database disposed within the main memory 24 according to one embodiment. The database 26 includes a NextNumbers table 102 for registering the next available value of the

parameters CustomerNumber, OrderNumber, ProductNumber and DistributorNumber. When a registered value is assigned, the assigned value is incremented by one and registered as the next available value for the parameter. For example, when the registered value of CustomerNumber is assigned to a new customer, the assigned value is incremented by one and becomes the registered value for the parameter CustomerNumber.

The database 26 also includes a PIN table (or password table) 104 containing each password and all other associated information provided by the telecommunications carrier to the system operator. In a preferred implementation, each password is paired within a specific "800"-type access number, and can be used to obtain a predefined amount of telephone service (e.g., \$5.00, 10 units, or 10 minutes of phone service). When the system operator purchases minutes of use from the telecommunications carrier, the operator may request that certain quantities of passwords corresponding to various denominations (e.g., \$10.00, \$20.00 and \$50.00, 10 or 20 units, or 10 or 20 minutes) be provided. When a password is assigned to a customer, the corresponding CustomerNumber and OrderNumber fields in password table 104 are updated with the values for these fields previously assigned to the Customer.

The Products table 108 contains a record for each denomination of electronic phone card sold by the system operator. For example, in a preferred implementation records will exist for passwords associated with \$10.00, \$20.00 and \$50.00, and/or 10 and 20 units, and/or 10 and 20 minute phone cards.

A Customer table 110 holds a record for each potential customer advancing to the page of the system operator's web site designed to accept orders for electronic phone cards.

In embodiments in which the system operator has commissioned distributors to  
5 sell electronic phone cards, a Distributor table 112 contains a record for each commissioned distributor.

An Order table 114 holds a record for each order placed for an electronic phone card. Within the Order table 114 fields exist for the ProductNumber, CustomerNumber, and DistributorNumber associated with an order.

10 An Administrative or Admin table 116 contains information used by the host computer 14 in performing certain administrative functions required to effect the online purchase/receipt of electronic phone cards contemplated by the present invention. For example, the Administrative table 116 will contain information specifying the Internet path for a particular web page to be sent to a user at a given instant. The Administrative  
15 table will also include information used during credit card validation (e.g., an identification number and password identifying the system operator to the retained credit validation service).

A Credit Validation table 120 holds information that is received from the credit validation service (e.g., Cybercash) in connection with the validation of a customer's  
20 credit card or other payment information. The table 120 also contains a merchant number or the like assigned by the validation service.

Referring again to FIG. 3, the dashed lines between the tables described above are intended to reflect the referential integrity maintained between such tables. In a preferred



embodiment this referential integrity is preserved using "foreign keys," a mechanism familiar to those skilled in the art. For example, the dashed line "fkOrdersDistNum" between the Orders table 114 and the Distributors table 112 represents that a certain referential integrity is being maintained. In this instance referential integrity is being maintained between orders entered in the Orders table and corresponding valid entries in the Distributors table should exist. In particular, the use of foreign key "fkOrdersDistNum" ensures that the Distributors table contains an entry for a DistributorNumber matching that in a corresponding order within the Orders table 114. If this correspondence is not found to exist (e.g., because a record is attempted to be inserted in the Orders table 114 which lacks a valid DistributorNumber), the foreign key mechanism causes the occurrence of an error condition.

Figures 4(a) and 4(b) provide an illustrative representation of the structure of the database disposed within the main memory 24, according to another embodiment. The database 26 includes a tblPins table 201 containing each PIN (or password). When a password is assigned to a customer, the corresponding MbrID (member identification), OfferID (offer identification), and VisitID (visit identification) fields in the tblPins table 201 are updated with the values for these fields previously assigned to the Customer on the current Visit. The tblPins table also contains OrdDate (order date) and LastEditDate (the last date that the record was edited).

The tblPinProducts table 207 contains a record for each denomination of electronic phone card sold by the system operator, as well as all other PIN information provided by the telecommunications carrier to the system operator. For example, records will exist for passwords associated with \$10.00, \$20.00 and \$50.00, 10 or 20 units, or 10

or 20 minute phone cards. The tblPinProduct table contains PinProductID (product identification), PinCarrierName (name of the password carrier), PinCarrierPhone (telephone number of the password carrier), Message (text associated with the delivered password product), PinTypeDesc (description of the password type), Price (price of the password product), Category (category of the password product), PinActive (permits management of password activation), LastEditedBy (the database user who last modified a record), and LastEditedDate (the last date on which the record was edited).

A tblMember table 205 holds a record for each customer or member advancing to the page of the system operator's web site designed to accept orders for electronic phone cards. The tblMember table also contains fields designated MbrID (customer or member identification), Email (email address of the customer or member), OfferID (an identification of the advertisement, offer, or product that attracted the customer or member), EmailStatus (the current status of the profile information associated with a customer or member), and LastEditedDate (the date on which the record was last edited).

A tblProfile table 204 holds a record for each customer or member's profile collected at the pages of the system operator's web site designed to accept demographic information related to itarget.com members. Fields include member identification (MbrID), offer identification (OfferID), a last-edited date (LastEditDate), and other profile information (ProfileXML). The tblProfile table also contains fields designated ProfileXML (an XML structure which records any profile information associated with a telephone service customer or member).

A tblVisits table 206 holds a record for tracking each customer or member's Visit to the pages of the system operator's web site designed to accept demographic

information related to the member. The tblVisits table also contains fields designated MbrID (the customer or member identification), OfferID (the offer identification), VisitID (the visit identification), VisitStatusID (the last completed step in a profiling series), VisitType (the type of visit, such as issue resolution, confirmation of an order, confirmation of membership status, etc.), LastEditedDate (the date on which the record was last edited).

A tblOrderHeader table 200 holds a record for each order placed for an electronic phone card. The purpose of the tblOrderHeader table 200 is to track information related to an entire Order. The Order record will be associated with multiple records in a tblOrderDetail table 203 that will track each unique product associated with the given Order. The tblOrderHeader table also is shown having fields designated OrdHdrID (header information for the order), MbrID (member or customer identification), OfferID (offer identification), VisitID (visit identification), OrdDate (date of the customer's or member's order), LastEditedDate (date on which the record was last edited).

The tblOrderDetail table 203 holds a record for each unique product associated with a given Order. The quantity of a product is tracked in this location, allowing for additional products to be added to the database over time. The tblOrderDetail table is also shown having fields designated OrdDtlID (identifies the detail of the order), OrdHdrID (header information for the order), MbrID (member or customer identification), OfferID (offer identification), VisitID (visit identification), PinID (password identification), PinNbr (password text, number, etc.), PinProductID (identification of the product that the customer or member obtained), ExpDate (expiration

date of the password), ExtSurveyID (extended profile identification), and LastEditedDate (date on which the record was last edited).

A tblCreditValidation table 202 holds information that is received from the credit validation service (e.g., CyberSource) in connection with the validation of a customer's credit card (or other payment) information. The tblCreditValidation table 202 also contains fields designated CrdVldID (credit or other payment validation identification), OrdHdrID (header identification of the order), OrderDate (date of the customer or member's order), MbrTrxNum (member transaction number), AVSCode (account validation source code), AuxMsg (auxiliary message from credit validation source), ActionCode (action code received from the credit validation service), RetrievalCode (retrieval code received from the credit validation service), AuthCode (authorization code received from the credit validation service), ErrMsg (error message received from the credit validation service), ErrLoc (error location received from the credit validation service), Status (status received from credit validation source), and LastEditedDate (date on which the record was last edited).

Additional tables are included in the model of Figures 4(a) and 4(b) to show the relationships between the tables necessary to accomplish the activities described in this document, and tables outside of the scope of this document.

Referring again to Figures 4(a) and 4(b), the lines between the tables described above are intended to reflect the referential integrity maintained between such tables. In a preferred embodiment this referential integrity is preserved using "foreign keys," a mechanism familiar to those skilled in the art. For example, the line between the tblPins table 201 and the tblOrderDetail table 203 represents that a certain referential integrity is

being maintained. In this instance referential integrity is being maintained between orders entered in the tblOrderDetail table and corresponding valid entries in the tblPins table should exist. In particular, the use of foreign key ensures that the tblPins table contains an entry for a PIN matching that in a corresponding order within the tblOrderDetail table 203. If this correspondence is not found to exist (e.g., because a record is attempted to be inserted in the tblOrderDetail table 203 which lacks a valid PIN), the foreign key mechanism causes the occurrence of an error condition.

The invention having been thus described, it will be obvious that the same may be varied in many ways not only in construction but also in application. For example, the artisan will find the invention suitable for use in systems other than telephone service. Also, the information transmitted to the customer's data sharing device may be in human-readable form and/or machine readable form, such as one- or multi-dimensional bar codes, and/or in black-and-white and color formats. Such variations are not to be regarded as a departure from the spirit and scope of the invention, but rather as modifications intended to be encompassed within the scope of the following claims.

What is claimed is:

1. A system for authorizing a user to use a telecommunications path, comprising:  
a central computer; and  
a user's data sharing device in communication with said central computer, said  
5 data sharing device for transferring a request for authorization to said central computer;  
wherein said central computer, in response to said request, transfers to said data  
sharing device a telephone access number to be used to dial the telecommunications path.
2. The system of claim 1, wherein said data sharing device is in communication with  
10 said central computer over a second path, said second path being other than the  
telecommunications path.
3. The system of claim 2, wherein said second path is the Internet.
- 15 4. The system of claim 1, wherein the telephone access number is for dialing a long-  
distance telephone service provider.
5. The system of claim 1, wherein said data sharing device further transfers to said  
central computer a quantity-of-service amount, said quantity-of-service amount  
20 designating one of: a monetary amount and a time amount.

6. The system of claim 1, wherein said data sharing device further transfers to said central computer a password to be used when accessing the telecommunications path.
7. The system of claim 1, wherein said data sharing device further transmits  
5 payment information to said central computer, and said central computer transfers the telephone access number only upon verification of said payment information.
8. A method of authorizing access to a telecommunications path, comprising:  
(a) transmitting, from a user's data sharing device over the Internet to a central  
10 host computer, a request for telecommunications service;  
(b) transmitting, from the central host computer to the user's data sharing device in response to the request, a telephone access number to be used to access the telecommunications path.
- 15 9. The method of claim 8, wherein the request of said step (a) includes a quantity-of-service amount identifying an amount of prepaid telecommunications service desired by the user.
10. The method of claim 8, wherein the telephone access number is for dialing a long-  
20 distance telephone service provider.
11. The method of claim 8, further comprising:

(c) transmitting, from the central host computer to the user's data sharing device, a password to be used when accessing the telecommunications path.

12. The method of claim 8, wherein the request of said step (a) includes payment  
5 information, said method further comprising:

(c) verifying, prior to said step (b), whether the payment information is valid.

13. The method of claim 8, wherein the request of said step (a) includes payment information identifying an account of the user, said method further comprising:

10 (c) charging the account in exchange for authorization to use the telecommunications path.

14. A method for accessing a telephone service provider, comprising:

transmitting a request, over the Internet, to a central computer, the central  
15 computer having authority to grant access to the telephone service provider, wherein the request includes a quantity-of-service amount;

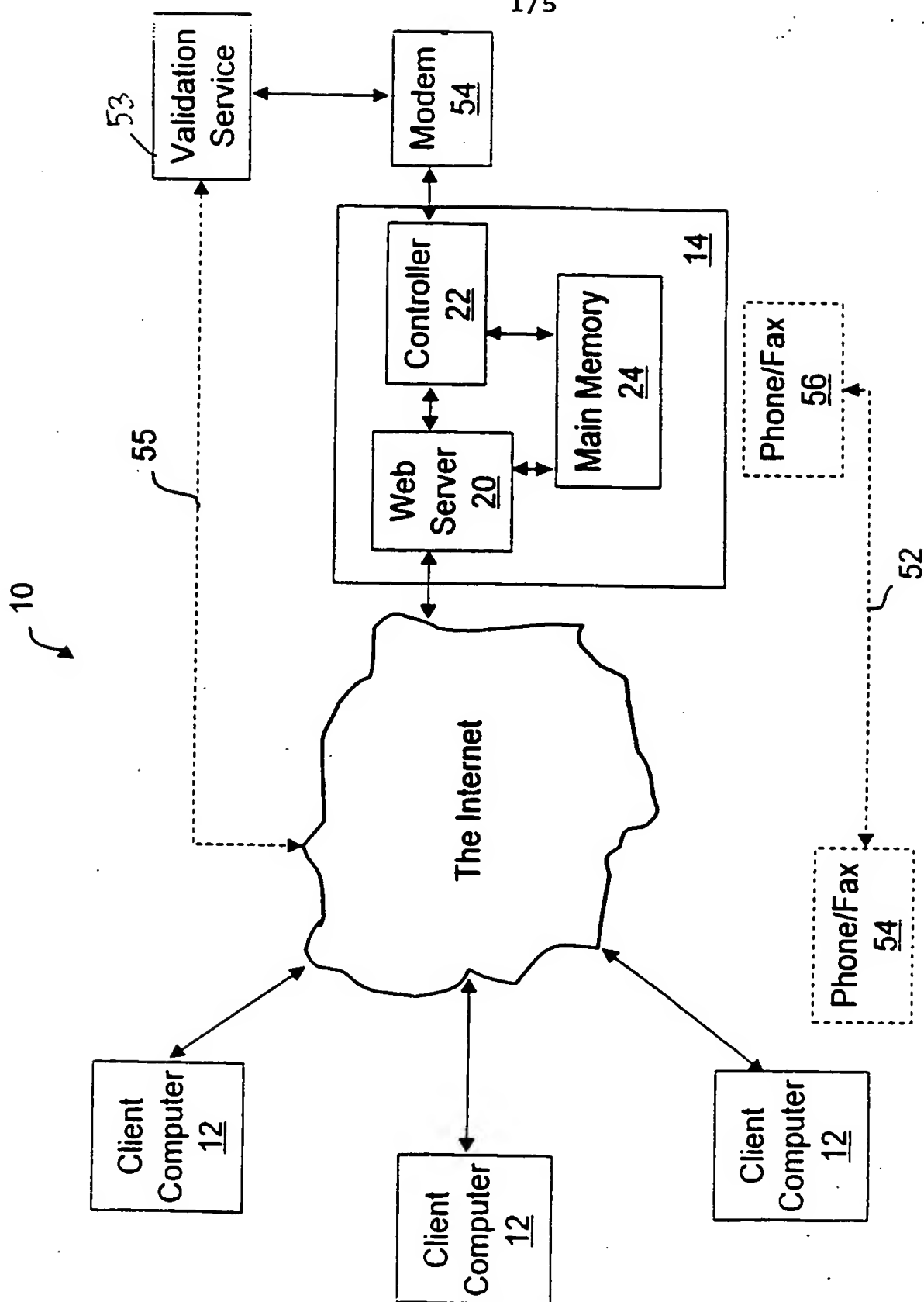
transmitting, over the Internet in response to the request, (i) a telephone access number for dialing the telephone service provider, and (ii) a password to be used when accessing the telephone service provider.

20

15. The method of claim 14, further comprising:

transmitting, with the request, at least one of: payment information and customer information.





**FIG. 1**

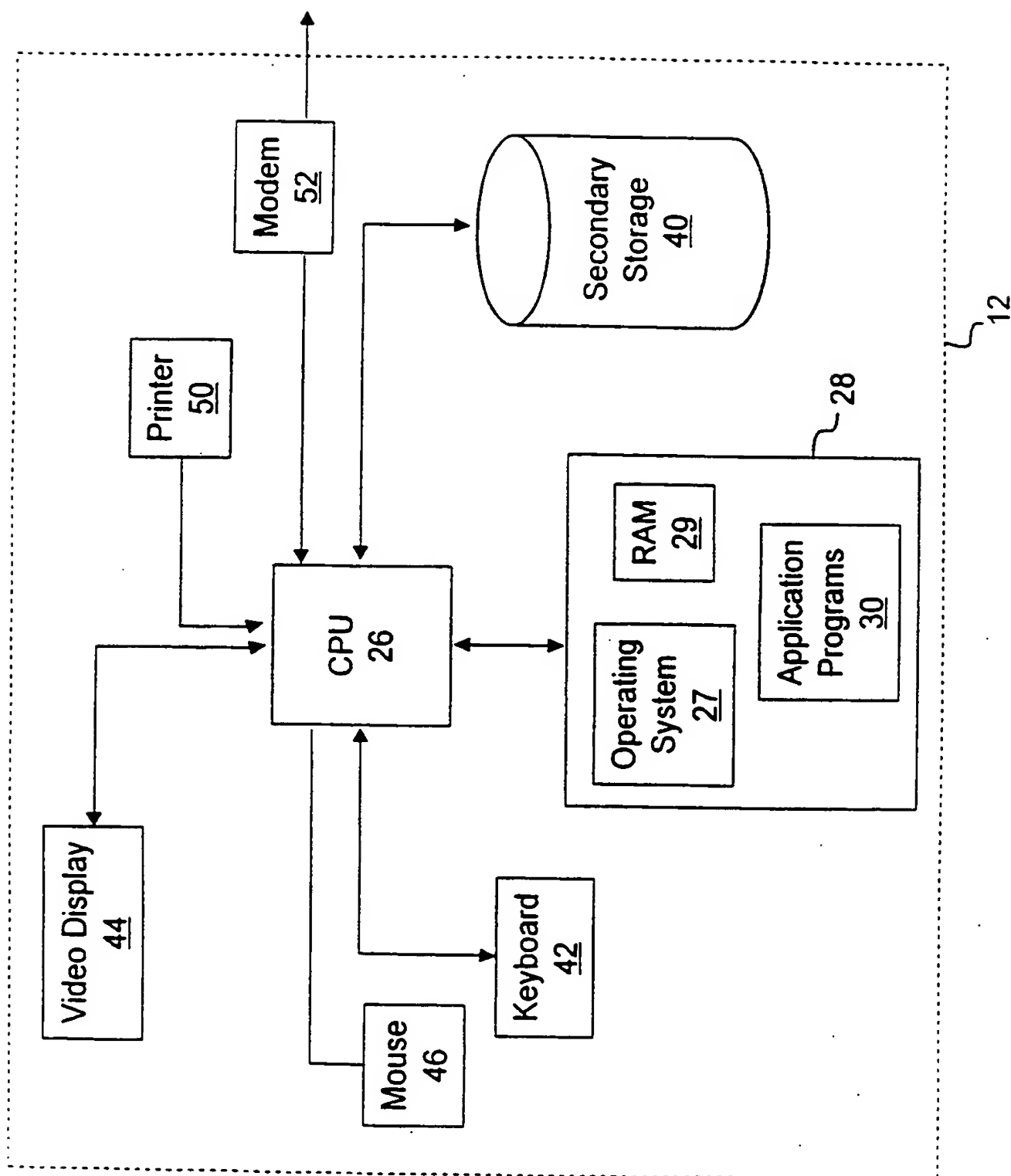
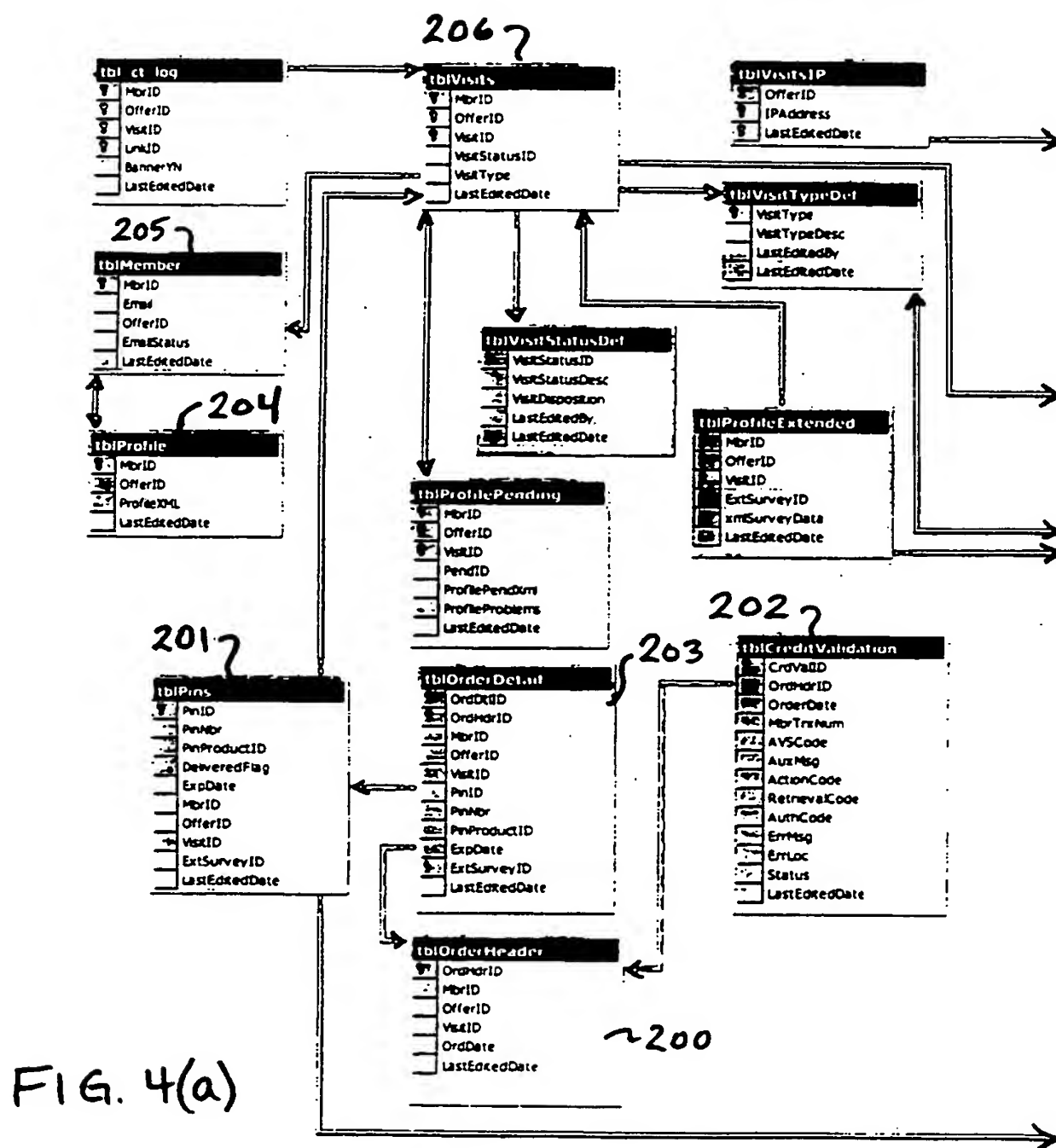


FIG. 2





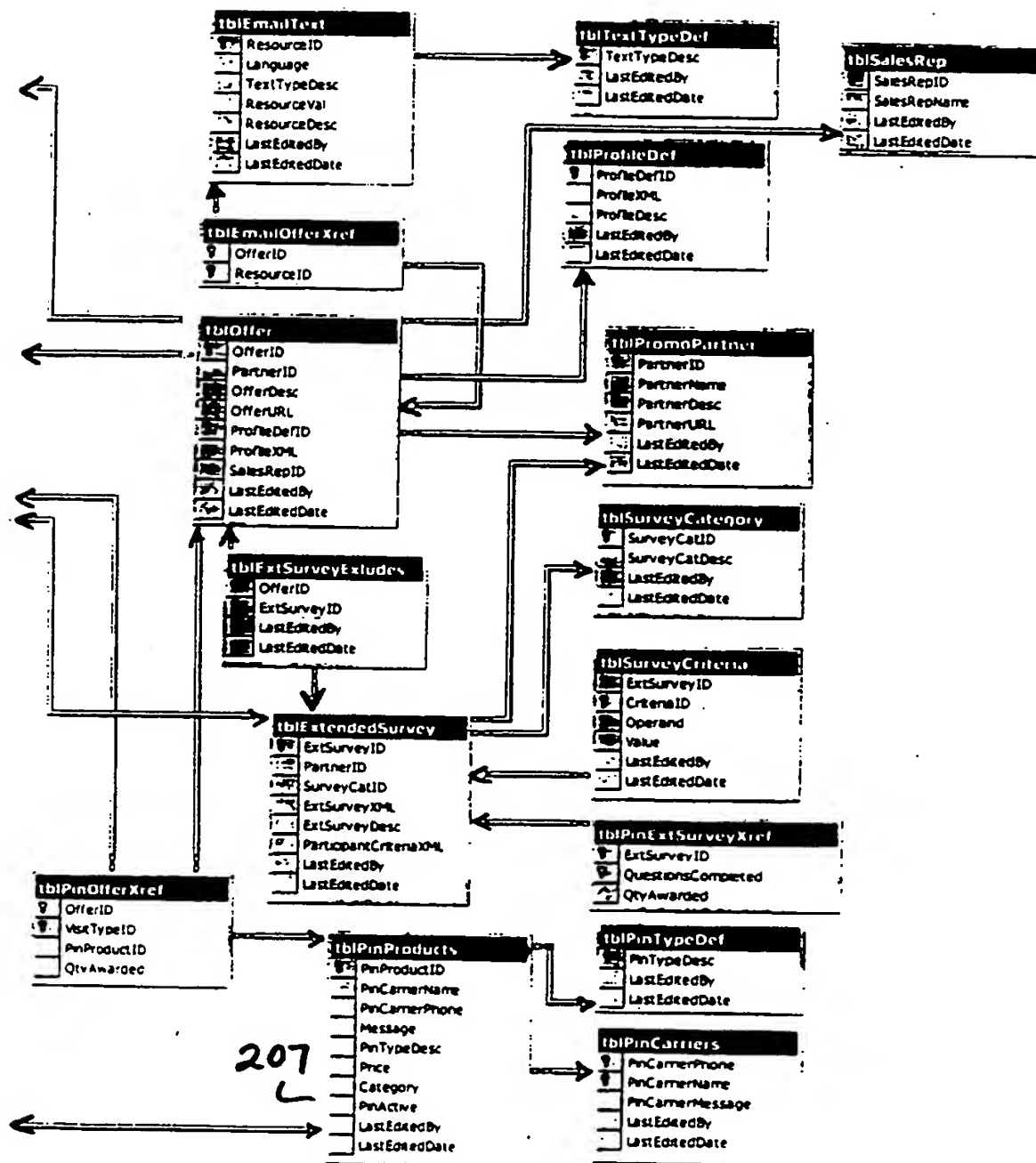


FIG. 4(b)

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/02311

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04M17/00 H04M15/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 98 54679 A (DSC TELECOM LP) 3 December 1998 (1998-12-03) abstract ---	1-15
A	WO 98 21874 A (ERICSSON TELEFON AB L M) 22 May 1998 (1998-05-22) page 12, line 6 - line 9 ---	1-15
A	WO 97 46031 A (AHOLA KALEVI ;ERICSSON TELEFON AB L M (SE)) 4 December 1997 (1997-12-04) abstract ---	1-15
A	abstract ---	2-15
P,X	WO 99 25106 A (AT & T CORP) 20 May 1999 (1999-05-20) the whole document -----	1-15

☐ Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

### \* Special categories of cited documents :

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Date of the actual completion of the international search

15 June 2000

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

I. national Application No

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